0901430-Essentials of Parallel & Distributed Systems
Course Syllabus

Instructor:	**Mohammad N. Olaimat**
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Office Location:	**College of IT– Dean's building, First Floor**
Office Hours	**TBA**
Course Schedule:	**-**
Course URL:	**www.Facebook.com/groups/Olaimat**

Course Description:
This course's objective is providing a comprehensive exploration of parallel and distributed systems. It explores system architectures, programming technologies, and trends. (examine the topic list for details)

Prerequisites: Operating Systems, Computer Architecture, C++/Java programming courses.

Course Texts:
- Multicore Application Programming; Darryl Gove; 2011; 9780321711373; Addison-Wesley.
- Introduction to Parallel Computing; Grama, Gupta, Karypis, Kumar; 2E; 2003; 0201648652; Addison Wesley.
- Principles of Parallel Programming; Lin & Snyder; 2009; 9780321487902; Addison-Wesley.

Contact: I will try to respond to e-mail messages, as my time permits. If you send an e-mail, please specify "Parallel Class" as the subject. I do not guarantee answering all the e-mail messages I receive.

Class Attendance: Attendance is mandatory. I will NOT be responsible for reporting your absences for you; track your own absences.

Grading Scale and Distribution: Your grade in this course will be based on evaluation of the homework, class participation, quizzes, and three exams. The final grade for the course will be determined based on the following distribution:

Grade Distribution

First Exam:	20%	(**14-03-2016**)
Second Exam:	20%	(**25-04-2016**)
Term activity	10%	
Final Exam:	50%	

Code of Conduct: The following policies are the rules by which we will operate in this term:
- **Make-Up Exams**: The rule is no makeup exams will be administered. Make-up exams will only be offered in extreme circumstances, which will require solid and verifiable evidence. Special rules are applicable to make-up exams- if ever offered.
- **Cheating**: If a student cheats or attempts to cheat during any exam or in any course component, the *minimum* penalty administered would be receiving a "Zero" in the course component and in the class-participation component, if exists. This policy shall be implemented against ALL parties participating in the cheating event.
- **Cell Phones**: Cell phones must either be turned off or set to "vibrate" mode.

- **Class Chatting**: It is a disruptive activity; therefore, it is prohibited. I shall dismiss (fail) chatting participants in the course after <u>three</u> warnings will have been administered.
- **Class Tardiness & Early Exit**: Attending class late or leaving early is most disruptive to class activity; it is prohibited. Tardy attendants will be dismissed from the course after <u>three</u> warnings will have been administered.

<u>Course Topics</u>
- Introduction to Parallel and Distributed Programming (definitions, taxonomies, trends)
- Parallel Computing Architectures, Paradigms, Issues, & Technologies (architectures, topologies, organizations)
- Parallel Programming (performance, programming paradigms, applications)
- Parallel Programming Using Shared Memory I (basics)
- Parallel Programming Using Shared Memory II (tools)
- Parallel Programming using Message Passing - I (basics)
- Parallel Programming using Message Passing - II (tools)
- Parallel Programming – Misc Topics
- Introduction to Distributed Programming (architectures, programming models)
- Distributed Programming Issues/Algorithms (problems)
- Distributed Computing Technologies
- Distributed Computing Tools
- Parallel and Distributed Computing – Practical Trends

<u>Note</u>: I reserve the right to modify this course plan to adapt to extenuating factors.